

Fig. 1

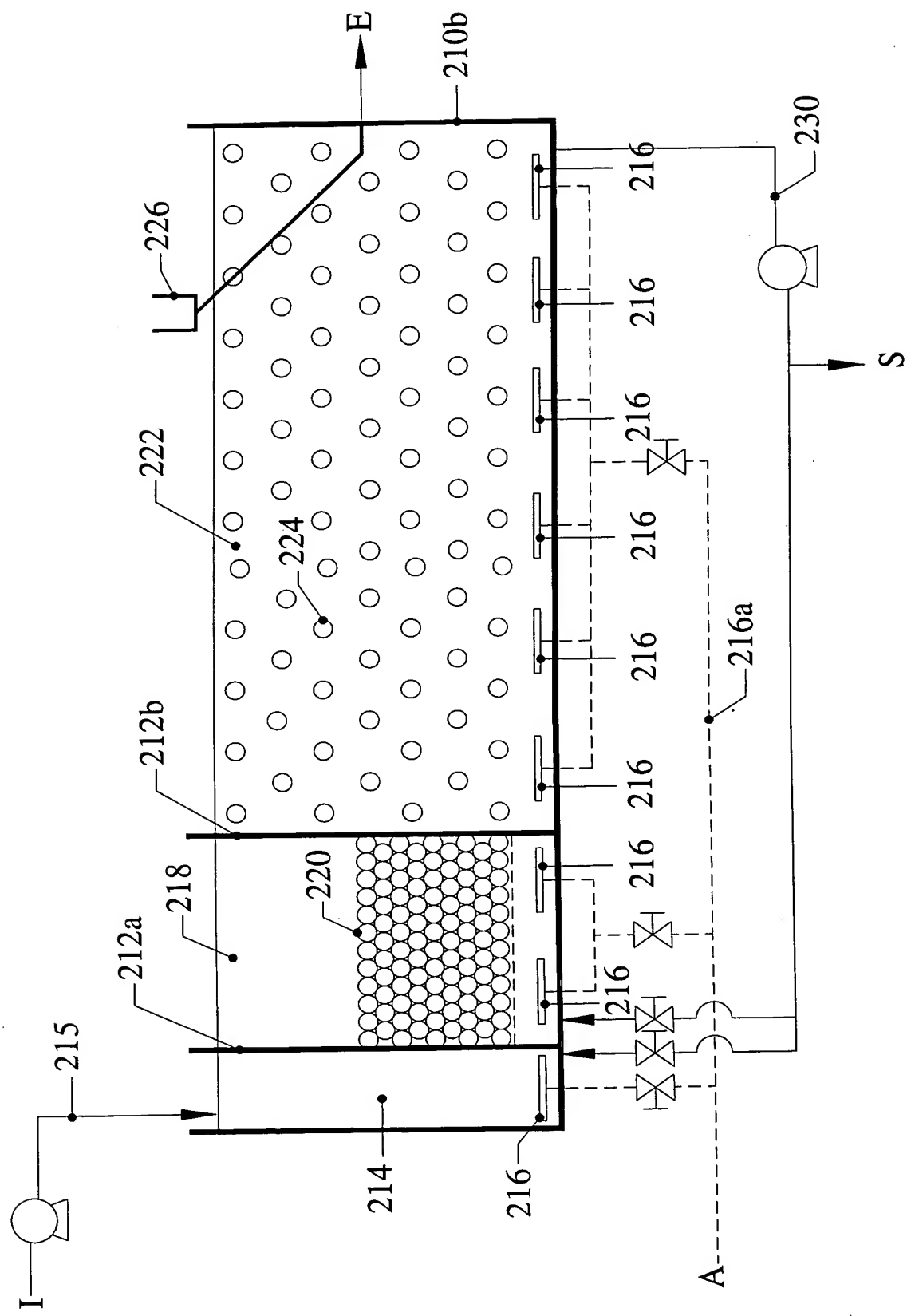


Fig. 2

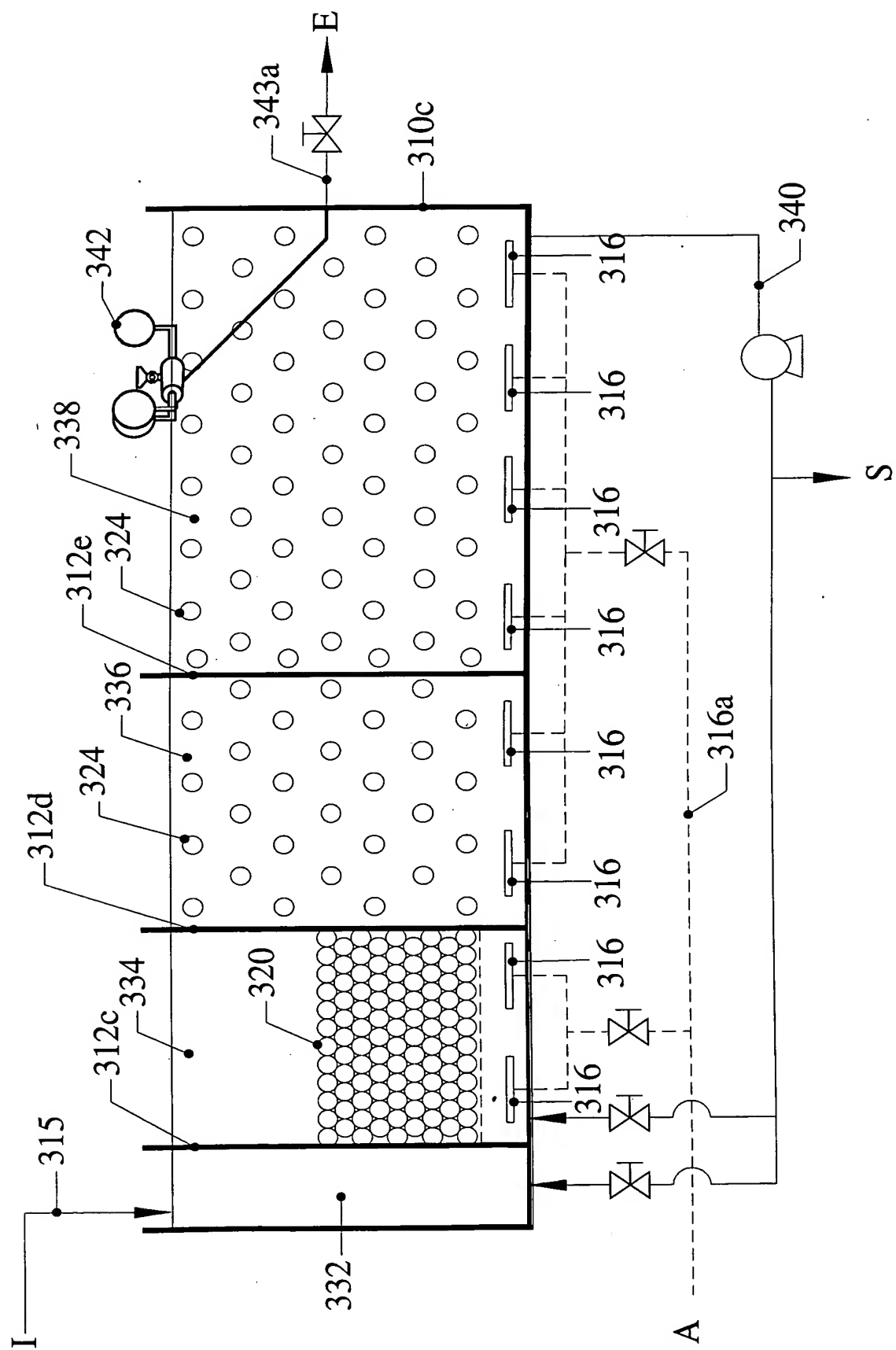


Fig. 3

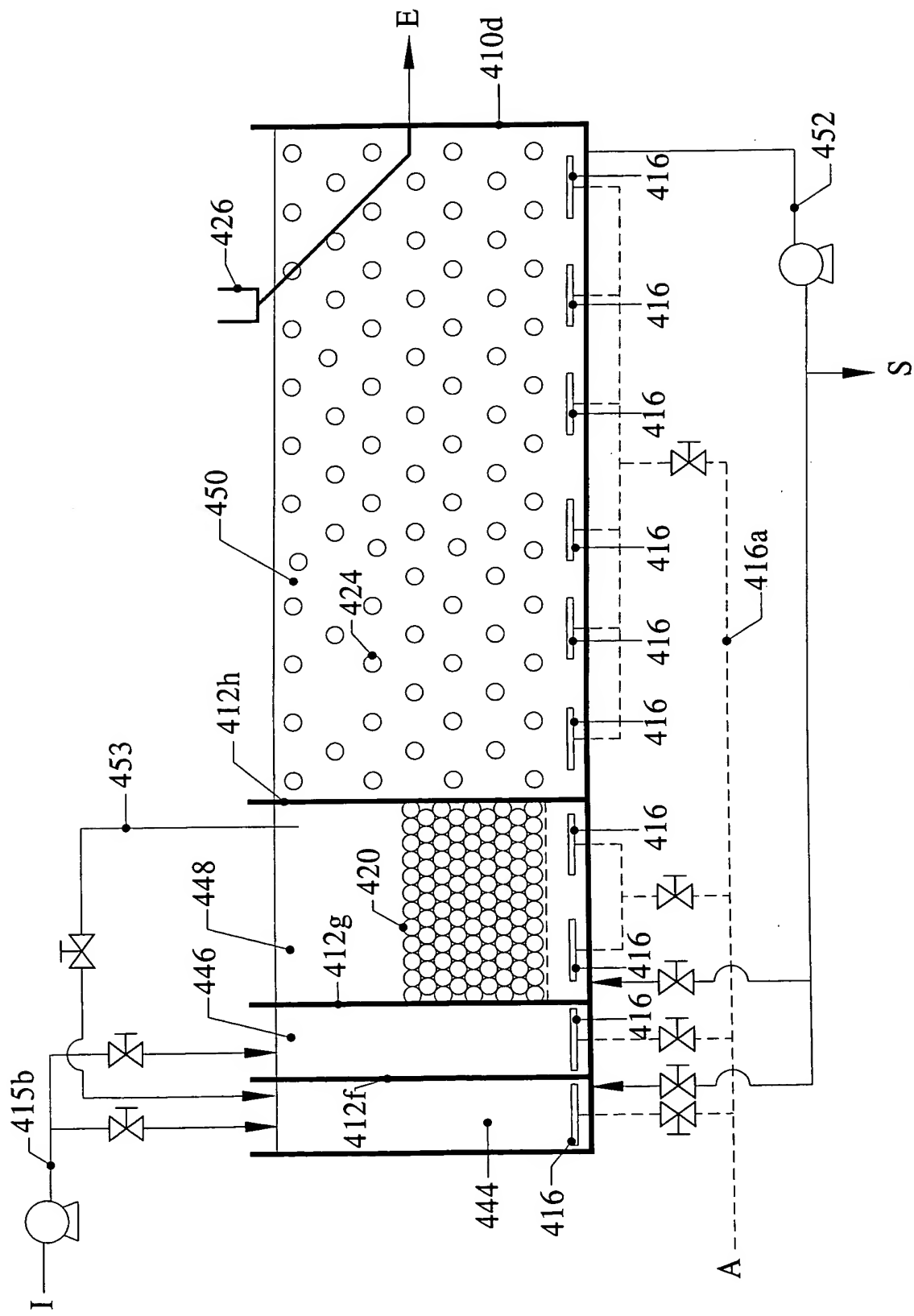


Fig. 4

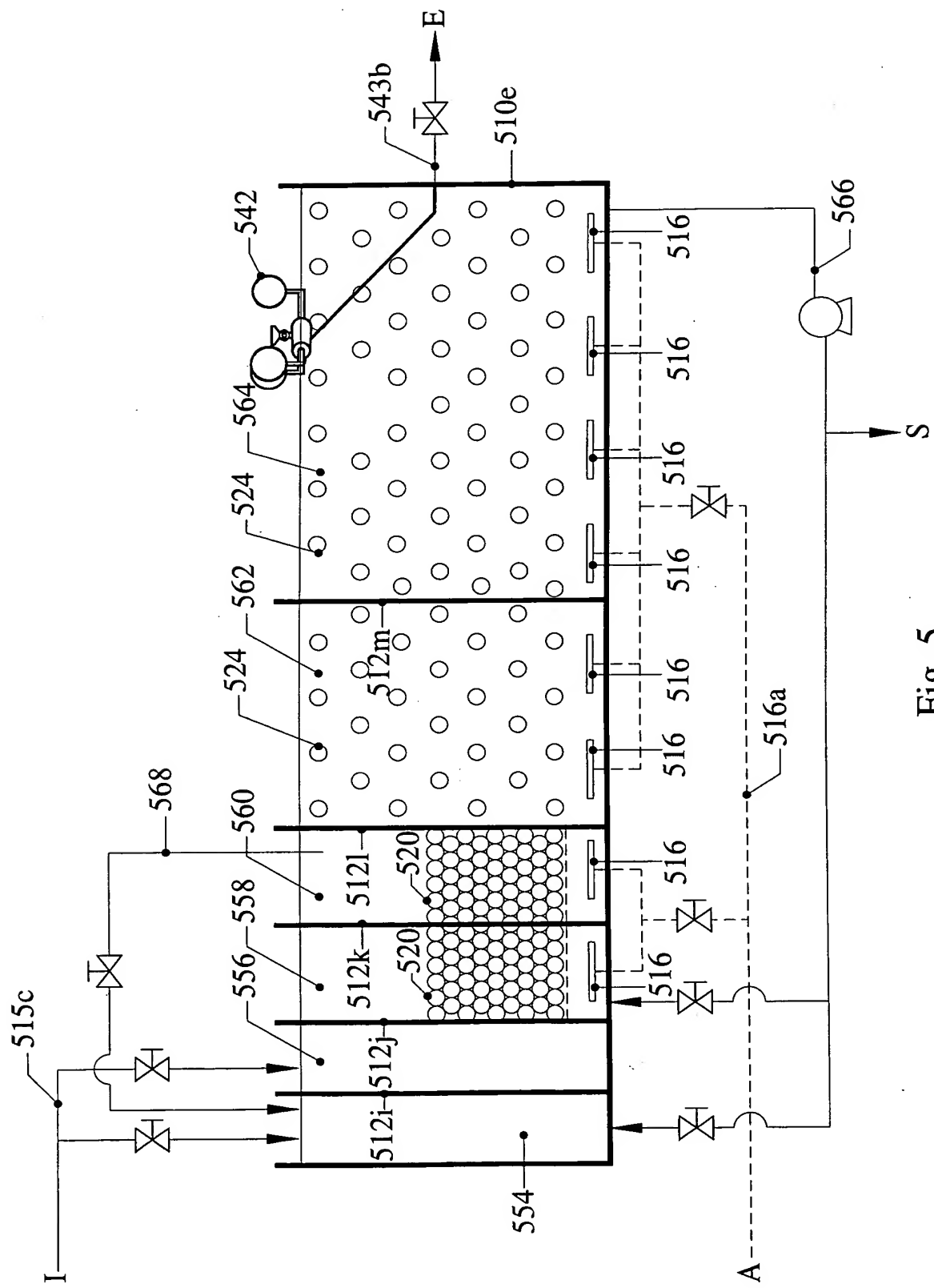


Fig. 5

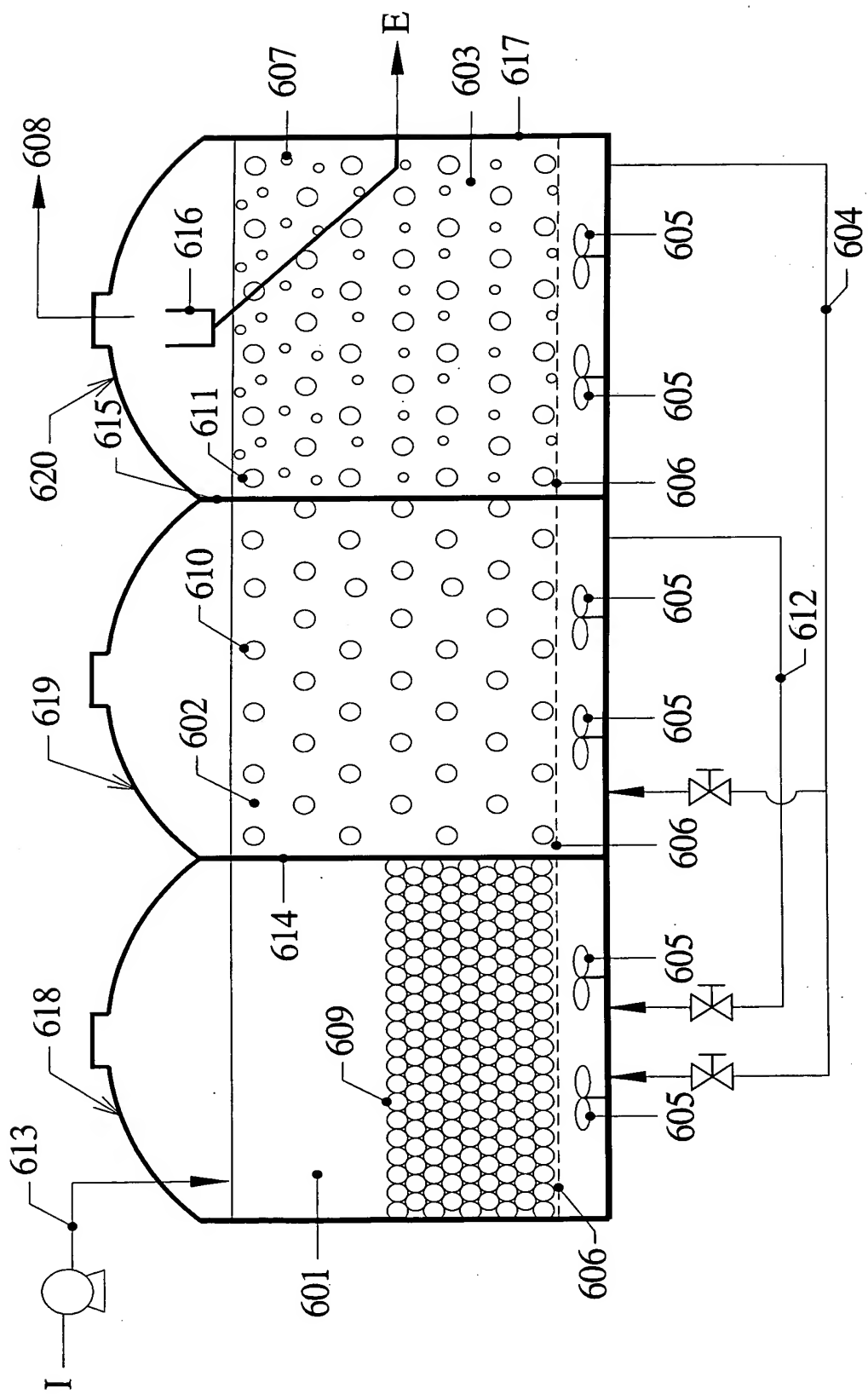


Fig. 6

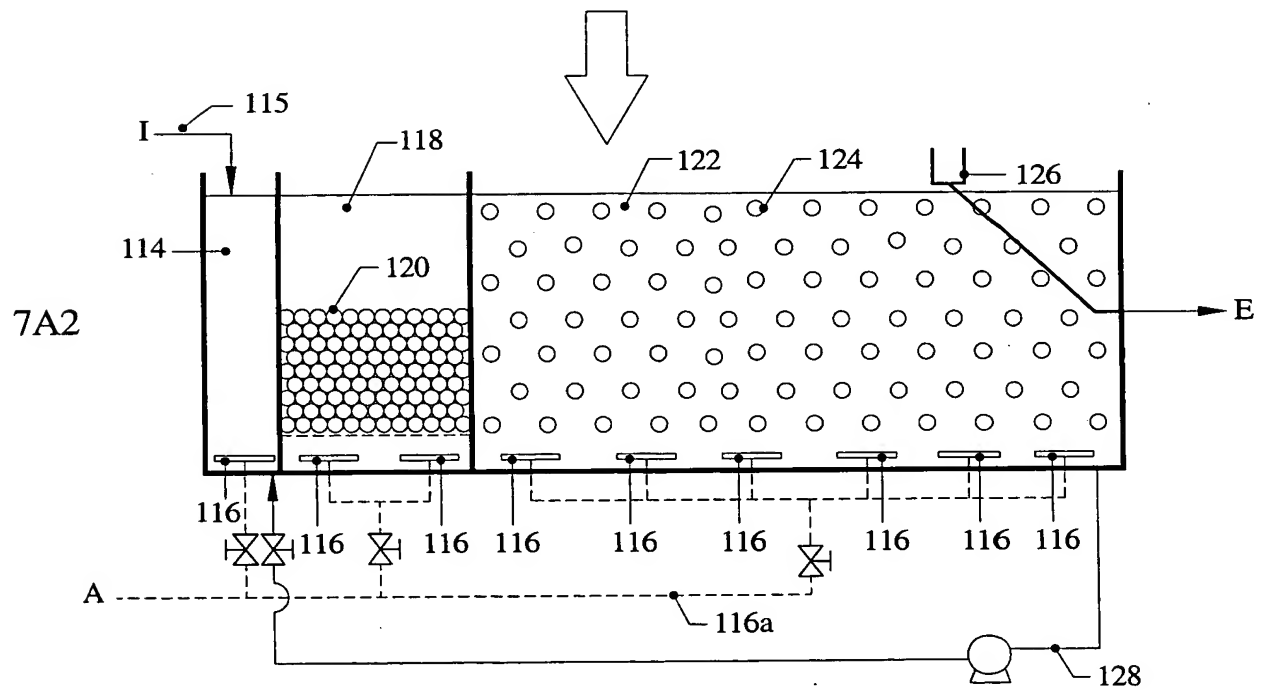
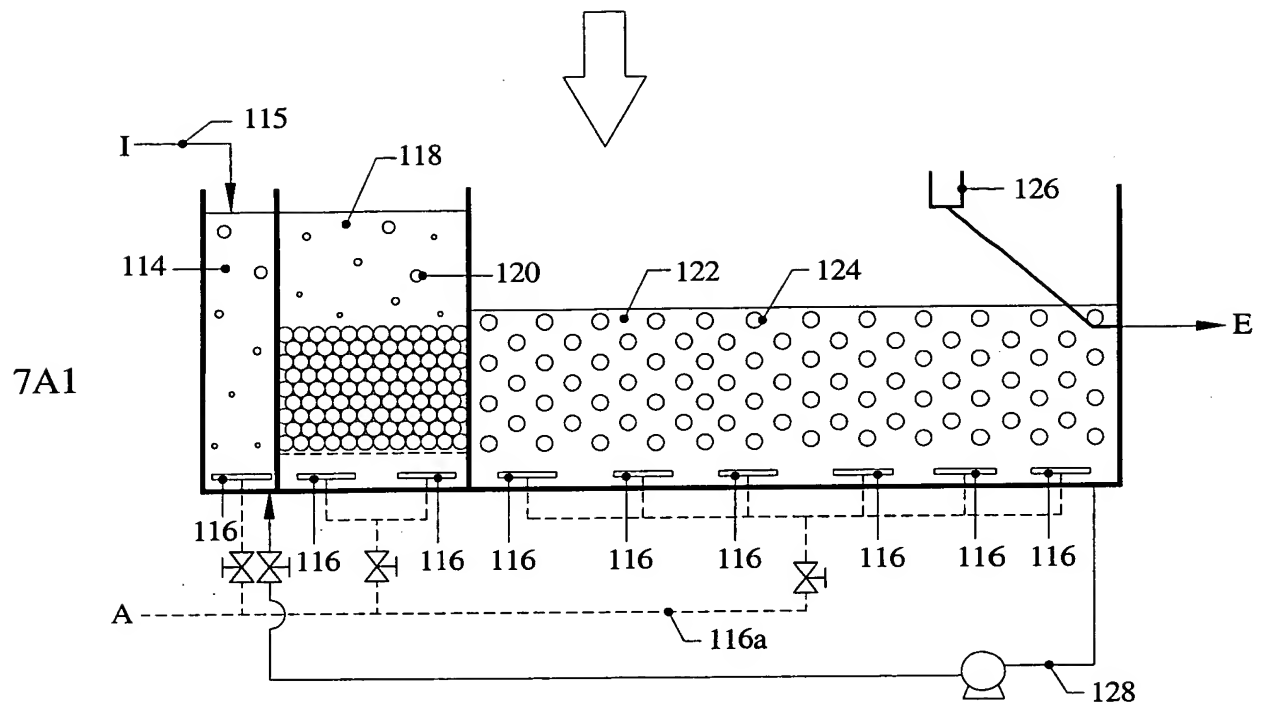


Fig. 7A

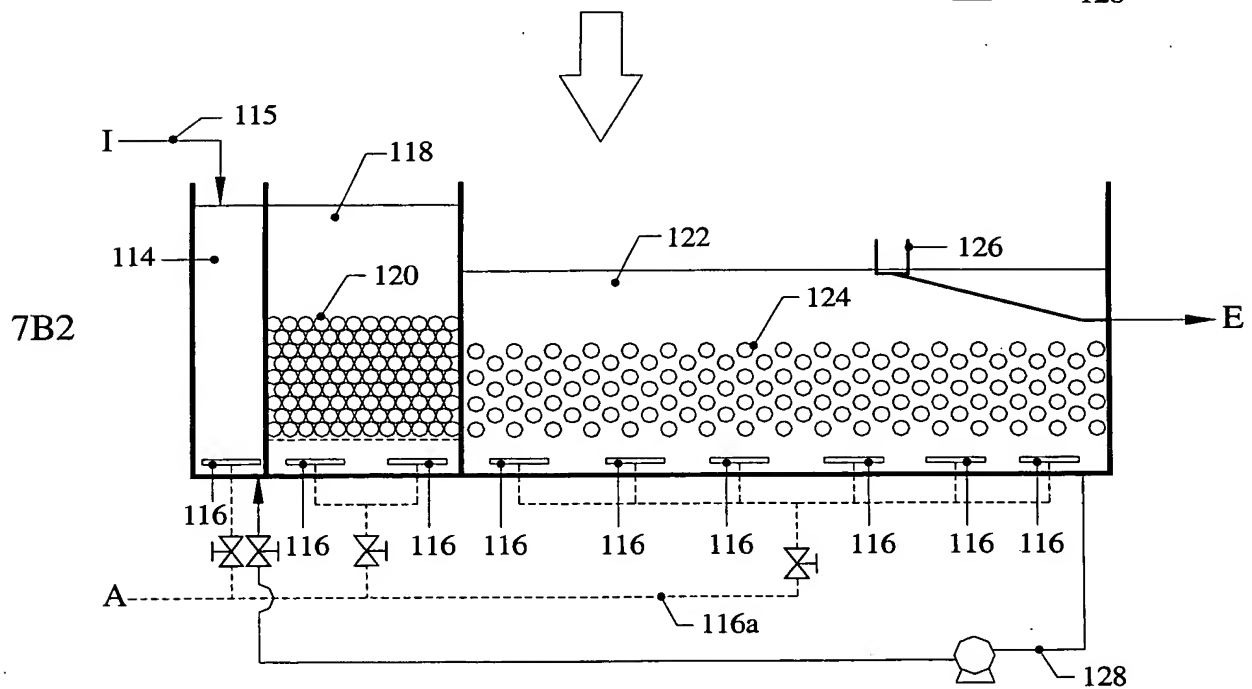
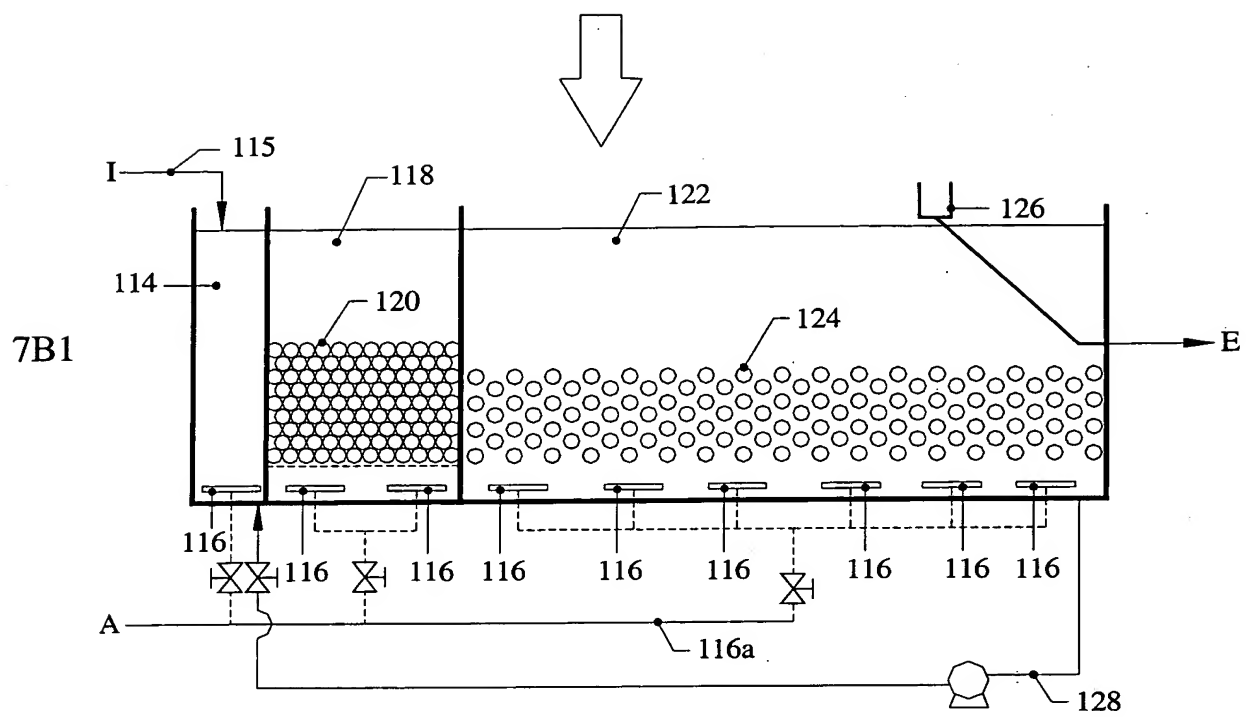


Fig. 7B

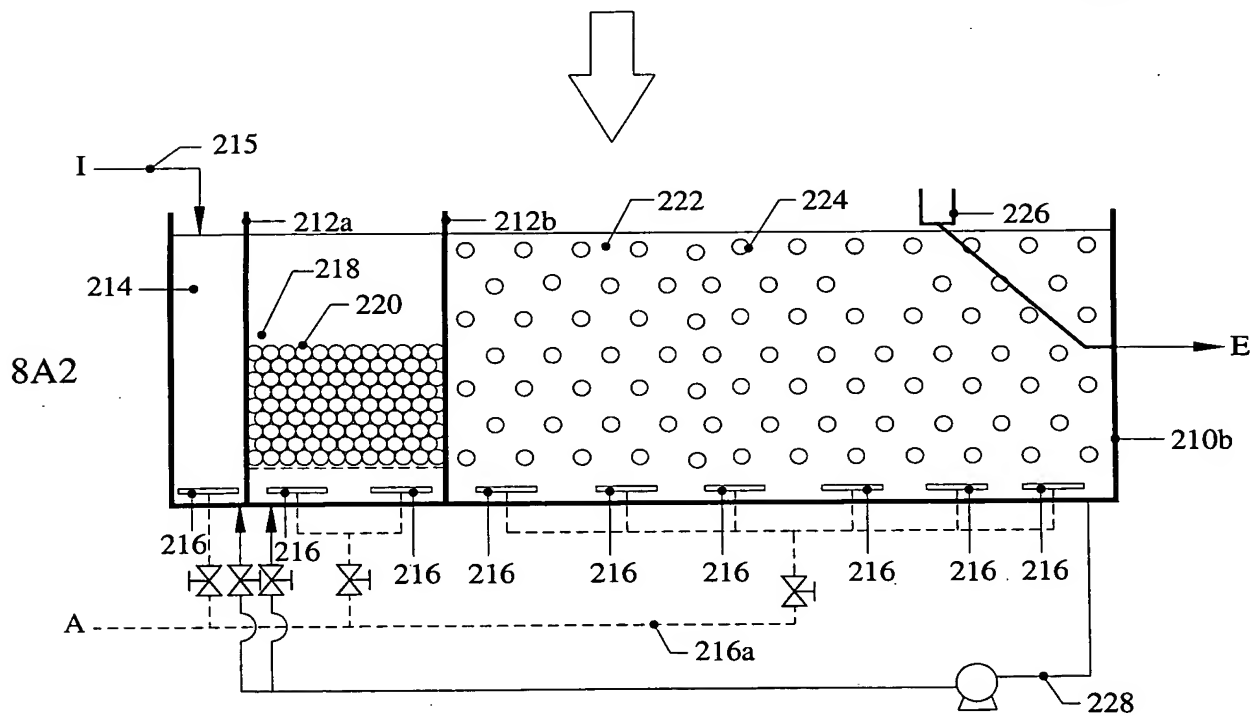
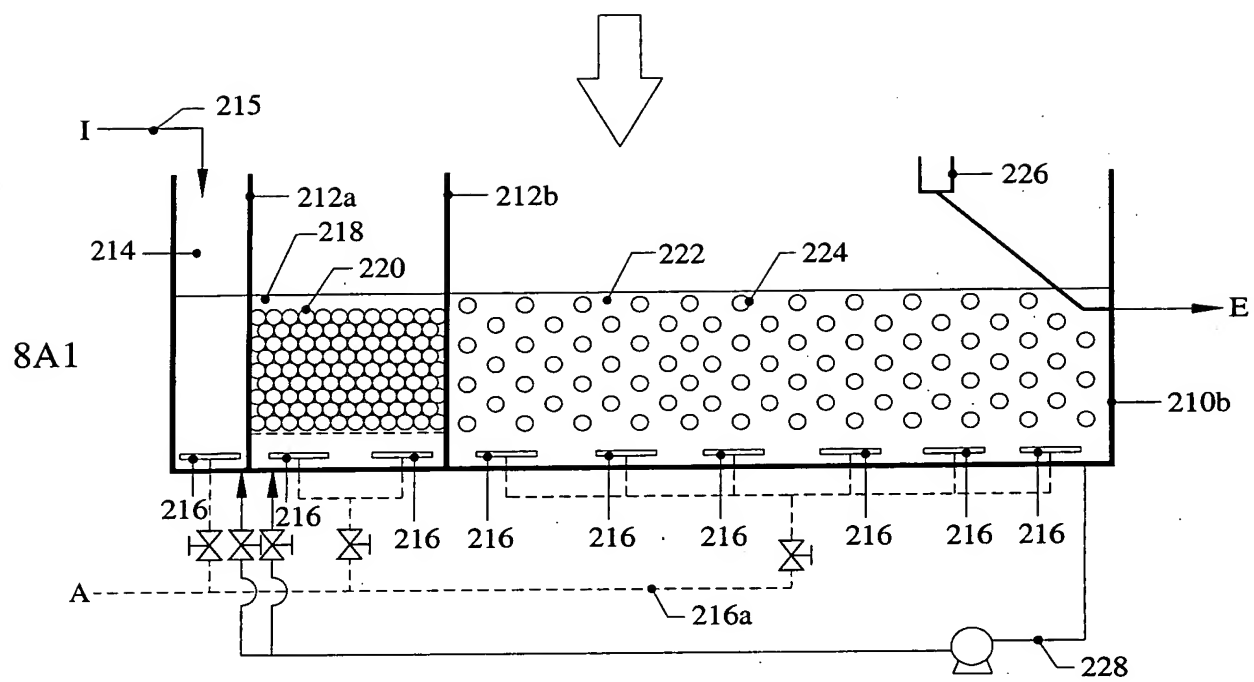


Fig. 8A

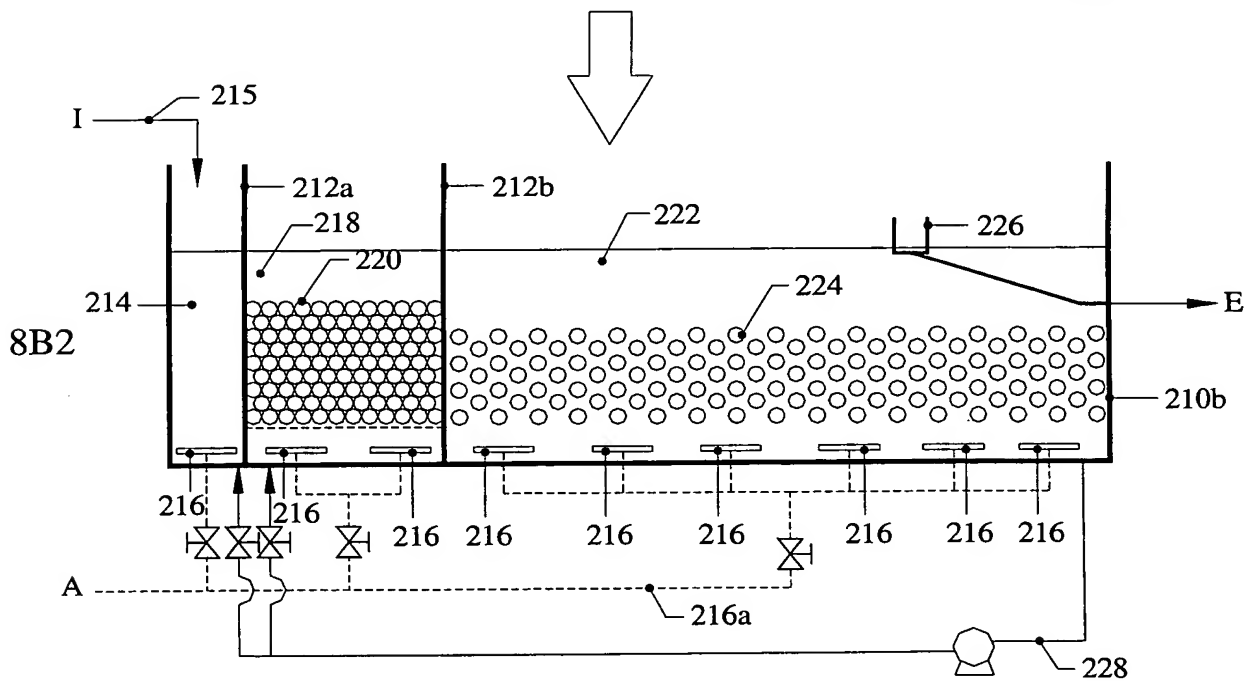
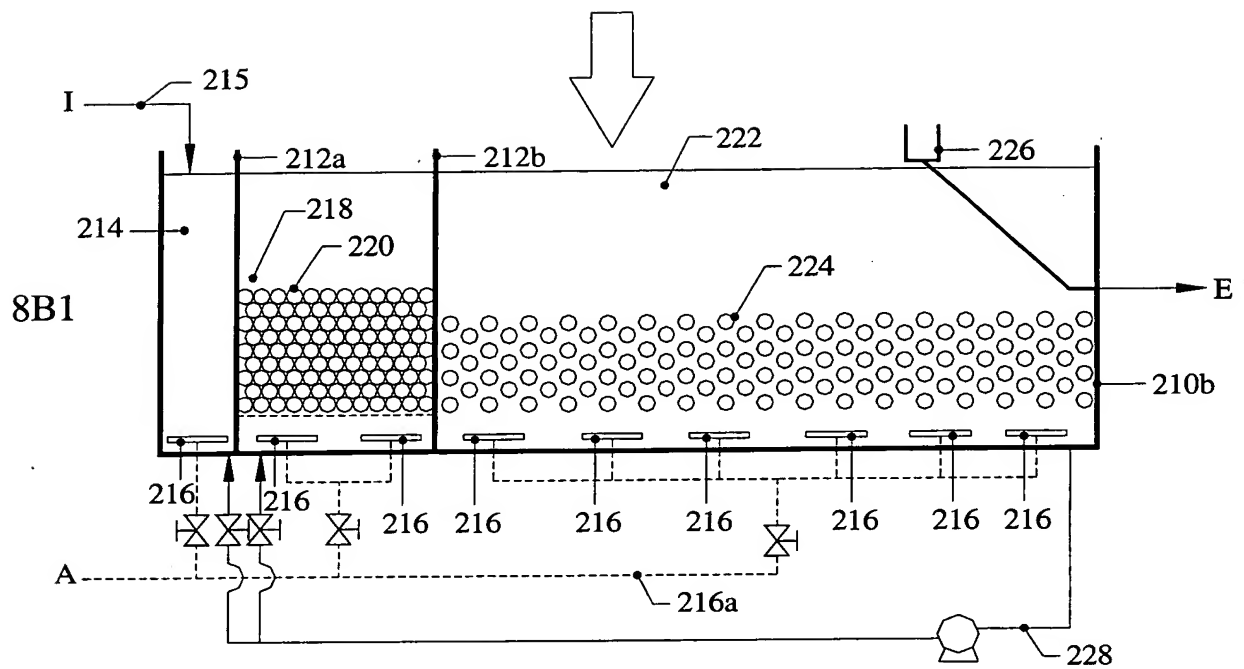


Fig. 8B

Period	pH	TCOD	SCOD	TSS	VSS	TKN	NH ₄ -N	TCOD:TKN
1	7.81	389	195	220	142	43	26	9.1
2	7.85	354	176	189	135	41	29	8.6
3	7.76	363	183	212	132	43	30	8.4
4	7.70	338	140	227	146	36	26	9.4
5	7.75	321	156	232	157	37	28	8.7
6	7.71	332	170	243	169	37	24	9.0
7	7.75	436	156	256	178	45	31	9.7
8	7.77	324	148	232	143	39	25	8.3
9	7.86	364	167	228	155	40	27	9.1
10	7.92	341	162	213	135	41	27	8.3
11	7.73	367	226	187	113	42	26	8.7
12	8.02	379	179	233	156	39	28	9.7
13	7.93	385	156	227	149	43	29	9.0
14	7.89	381	174	262	169	41	31	9.3
15	7.75	406	181	253	173	45	30	9.0
16	7.68	382	184	237	156	39	27	9.8
17	7.44	393	172	243	163	38	31	10.3
18	7.77	411	169	261	177	44	28	9.3
19	7.63	379	183	224	136	43	32	8.8
20	7.65	397	167	264	159	42	33	9.5
21	7.83	387	183	244	152	39	29	9.9
22	7.56	372	186	226	141	42	31	8.9
23	7.76	417	178	268	187	41	29	10.2
24	7.79	395	193	237	144	40	29	9.9
25	7.82	364	191	206	125	38	27	9.6

Fig. 8C

Fig. 8D

SBR3											
Phase	Period	TCOD	SCOD	TSS	VSS	TKN	NH ₄ -N	NO ₃ -N	MLSS	MLVSS	
I	1	95	80	10	7	8.3	4.4	10.2	3430	2400	
	2	93	80	9	6	7.9	4.4	9.6	3350	2520	
	3	83	72	8	5	6.0	3.7	8.8	3560	2360	
	4	78	68	7	5	6.0	3.0	7.2	3450	2480	
	5	73	61	8	5	5.5	2.1	4.3	3530	2450	
	6	75	61	7	5	5.2	1.5	4.6	3420	2320	
	7	72	58	9	6	4.5	1.7	4.6	3680	2540	
	8	70	54	6	4	4.2	1.2	5.4	3570	2570	
	9	76	57	7	5	4.6	1.6	5.6	3250	2270	
	10	74	64	8	5	5.8	2.4	6.4	2310	1550	
II(a)	11	96	78	12	8	6.2	2.8	8.0	1450	1000	
	12	94	82	8	5	7.2	2.8	8.4	1420	970	
	13	89	79	7	5	5.4	2.4	8.8	1350	890	
II(b)	14	85	77	6	4	6.2	2.9	7.9	1290	810	
	15	85	73	8	5	6.7	3.1	7.9	1330	860	
	16	84	69	9	6	6.2	2.2	7.8	1360	890	
	17	95	79	11	7	5.0	2.0	8.3	1410	900	
II(c)	18	90	72	13	9	5.4	2.1	8.8	1350	920	
	19	83	72	7	5	4.8	1.8	8.0	1370	840	
II(d)	20	84	69	8	5	5.5	2.0	9.2	1400	920	
	21	94	74	12	8	5.9	2.1	8.4	1380	950	
	22	87	71	9	6	6.0	2.2	8.5	1340	910	
II(e)	23	94	73	12	8	6.4	2.3	7.2	1370	880	
	24	88	74	9	6	5.3	2.3	8.6	1420	850	
	25	86	75	7	5	5.2	2.2	8.3	1280	900	

Conventional SBR										
Phase	Period	TCOD	SCOD	TSS	VSS	TKN	NH ₄ -N	NO ₃ -N	MLSS	MLVSS
I	1	94	80	9	6	8.3	4.7	10.0	3550	2480
	2	95	82	11	7	7.8	4.6	9.9	3650	2445.5
	3	88	78	7	5	8.6	4.8	9.9	3620	2470
	4	90	79	6	4	8.3	5.3	9.6	3550	2670
	5	95	77	9	6	9.0	5.3	9.9	3670	2610
	6	84	78	7	5	8.7	5.2	10.1	3480	2540
	7	91	76	10	7	9.1	5.8	10.0	3890	2740
	8	90	78	8	5	9.3	6.1	9.6	3720	2610
	9	85	76	6	4	8.5	4.7	9.4	3450	2450
	10	102	87	9	6	10.8	7.3	8.0	2200	1350
	11	125	103	12	8	20.2	16.7	4.4	1520	990
	12	127	107	11	7	22.5	18.7	4.5	1550	1020
	13	123	109	7	5	23.8	20.2	4.3	1480	960
II(a)										

Fig. 8E

Period	pH	TCOD	SCOD	TSS	VSS	TKN	NH ₄ -N	TP	PO ₄ -P	TCOD:TKN
1	6.84	478	258	220	181	39	25	11.1	7.8	12.3
2	6.80	454	239	223	174	42	27	11.6	8.2	10.8
3	7.35	465	246	219	171	40	26	10.9	8.5	11.6
4	7.76	442	203	232	185	38	28	10.7	8.3	11.6
5	7.70	435	219	231	196	37	26	11.5	6.7	11.8
6	6.94	432	233	243	208	39	24	10.0	7.6	11.1
7	7.20	452	219	256	217	43	29	10.8	7.2	10.5
8	7.08	434	211	232	182	37	23	10.7	6.9	11.7
9	7.05	446	189	228	194	42	25	11.4	7.7	10.6
10	7.05	442	225	213	174	43	26	9.7	7.1	10.3
11	7.15	467	289	194	152	42	27	10.2	7.9	11.1
12	7.11	482	242	231	195	45	28	10.5	7.6	10.7
13	7.30	487	219	237	188	44	29	10.2	7.4	11.1
14	7.45	481	237	267	208	46	31	11.3	7.3	10.5
15	7.15	432	244	256	212	41	37	11.0	6.9	10.5
16	7.28	478	247	273	195	39	25	11.3	8.0	12.3
17	7.34	425	235	245	202	36	31	9.7	7.5	11.8
18	7.32	454	232	276	216	44	25	10.3	7.6	10.3

Fig. 8F

SBR3												
Phase	Period	TCOD	SCOD	TSS	VSS	TKN	NH ₄ -N	NO ₃ -N	PO ₄ -P	TP	MLSS	MLVSS
I	1	69	48	17	10	3.6	1.6	4.7	7.0	7.7	3575	2400
	2	67	47	19	13	2.1	1.3	5.2	6.3	7.2	3450	2450
	3	61	43	18	12	2.3	0.6	4.8	6.0	6.5	3360	2350
	4	54	37	21	14	1.5	0.6	4.4	5.9	6.9	3440	2440
	5	46	32	20	15	1.9	1.1	4.2	5.8	6.7	3350	2510
	6	42	30	15	11	1.6	0.8	4.0	5.6	6.4	3380	2480
II	7	45	32	14	10	2.3	1.5	4.6	5.5	6.3	2530	1780
	8	51	36	16	11	3.6	2.0	5.4	5.0	6.0	1800	1290
	9	57	38	21	17	3.0	1.6	5.6	4.5	5.2	1840	1270
	10	54	36	17	11	3.2	1.6	5.0	4.4	5.3	1810	1350
III(a)	11	52	38	19	12	3.5	2.0	5.6	2.8	3.7	1750	1300
	12	46	32	16	12	3.4	1.8	5.8	1.6	2.4	1820	1370
	13	53	38	19	13	3.1	1.5	3.4	1.0	2.0	1850	1390
	14	54	37	19	12	3.2	1.8	5.7	1.7	2.4	1890	1280
III(b)	15	53	36	22	15	3.4	2.1	5.7	1.8	2.3	1830	1360
	16	50	35	21	14	3.6	2.2	5.0	1.8	2.5	1660	1200
III(c)	17	56	39	13	12	3.5	2.0	4.9	1.6	2.9	1810	1300
III(d)	18	49	33	21	14	3.7	2.1	5.4	1.8	2.8	1750	1320

Fig. 8G

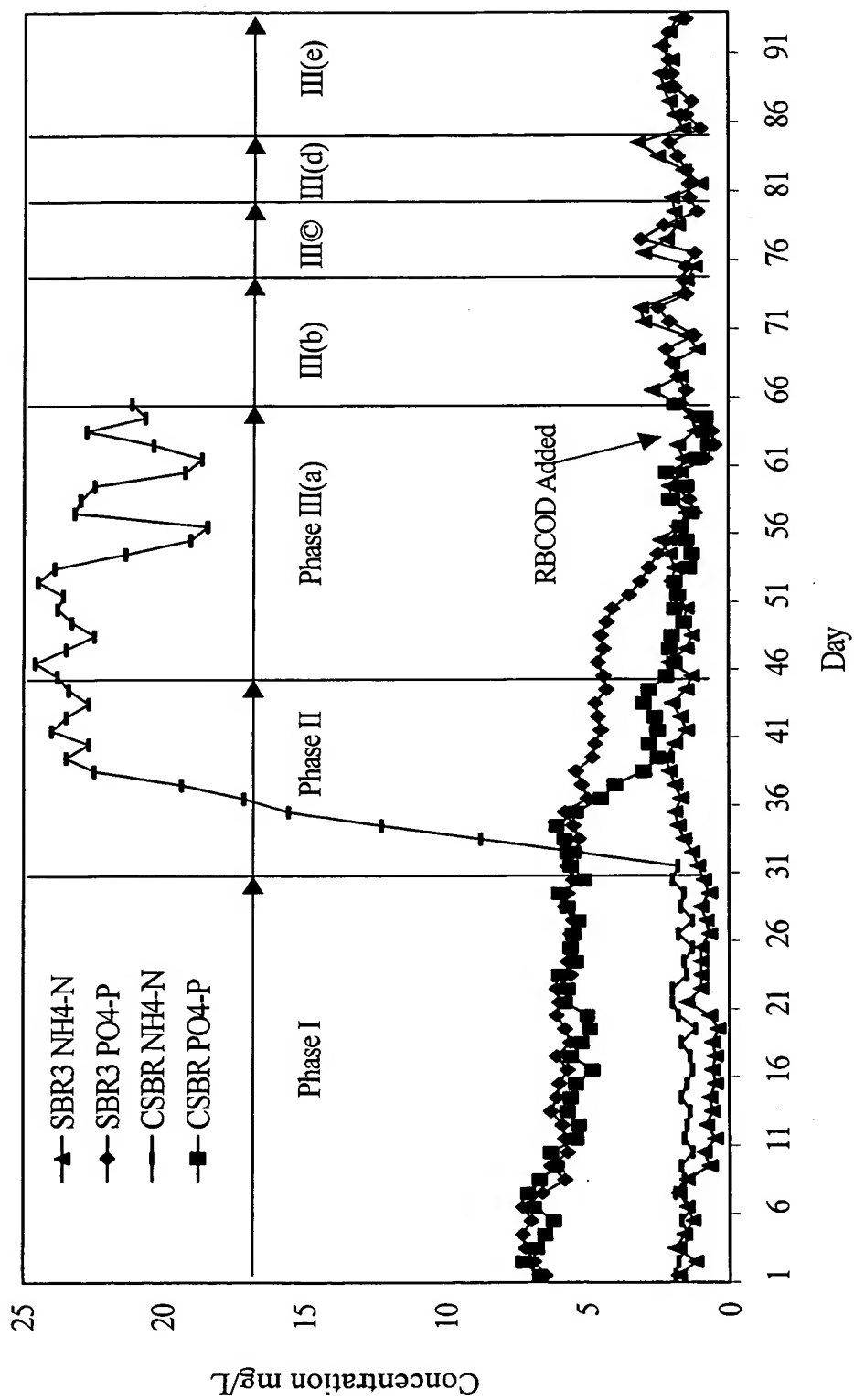


Fig. 8K

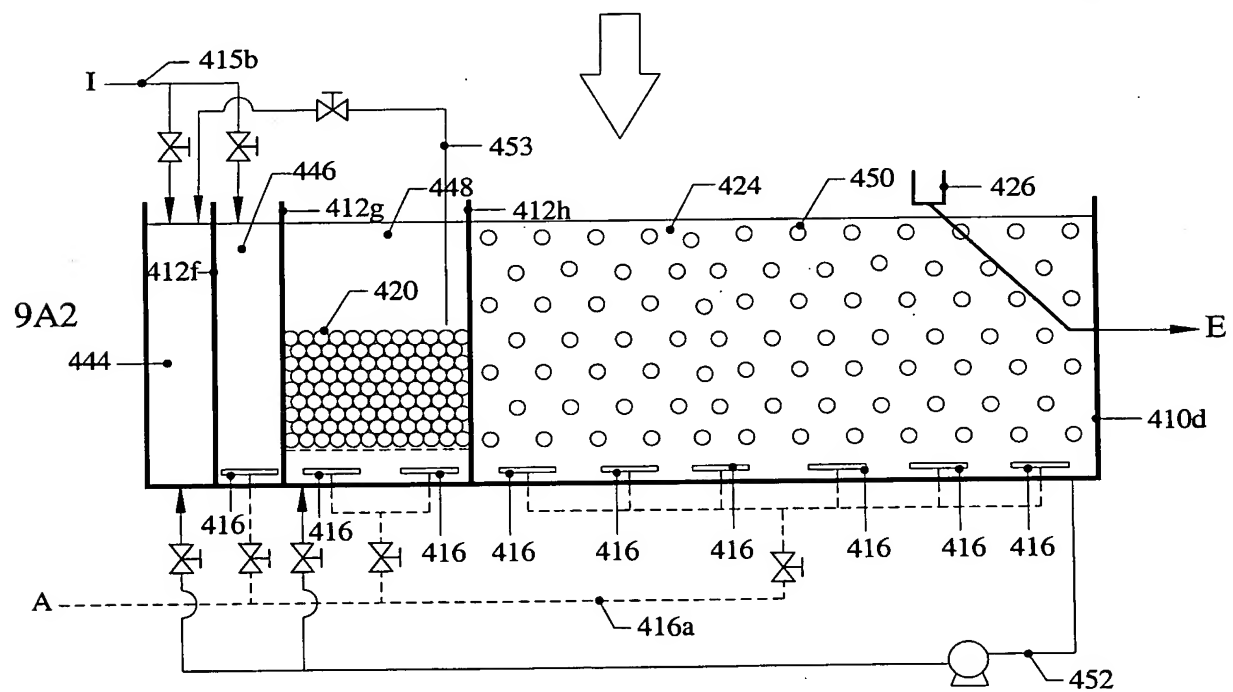
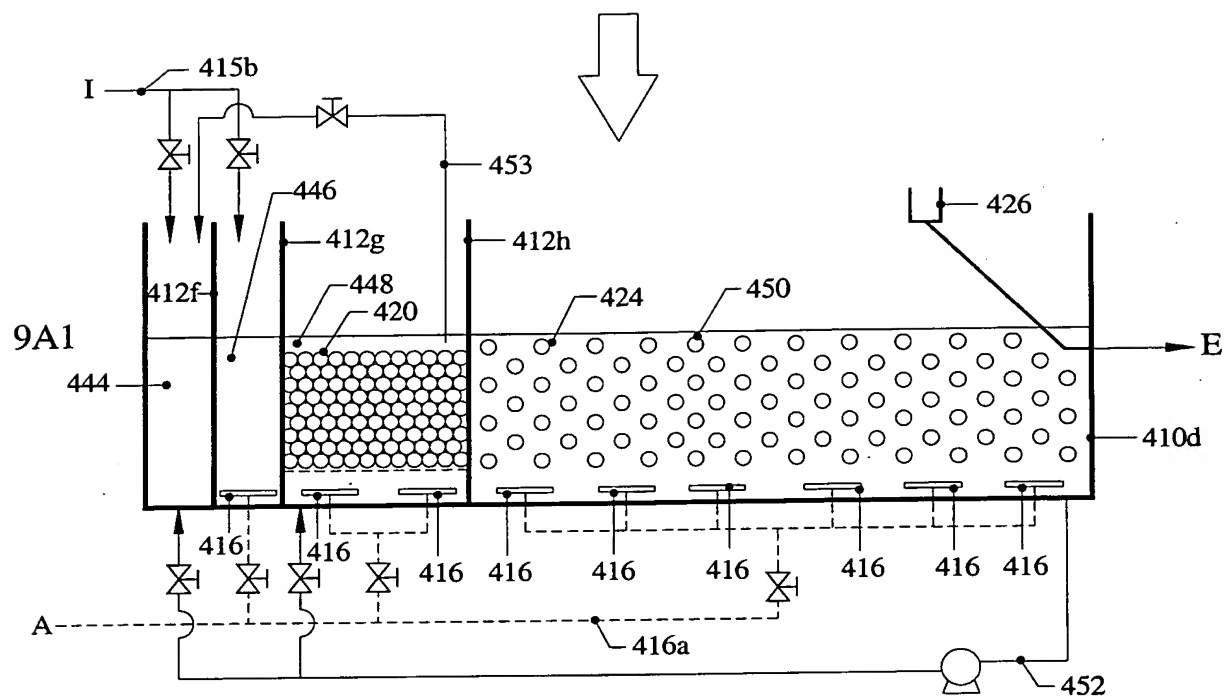


Fig. 9A

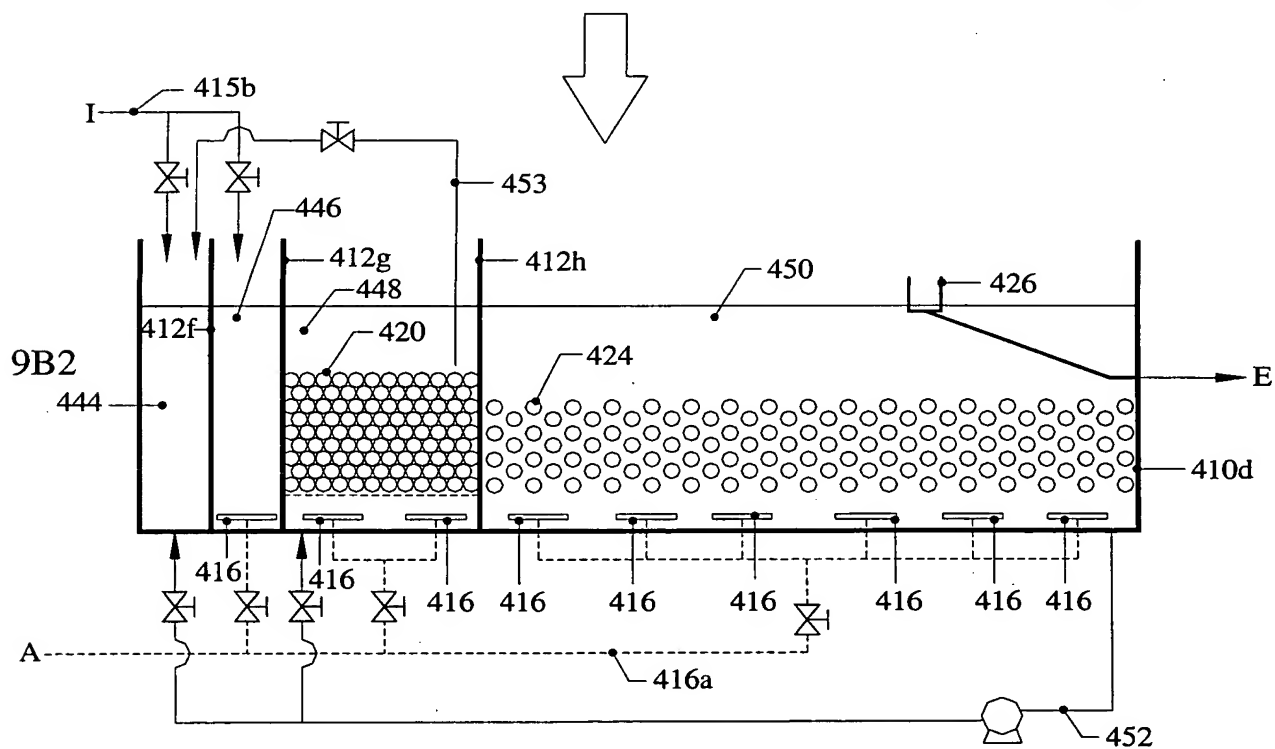
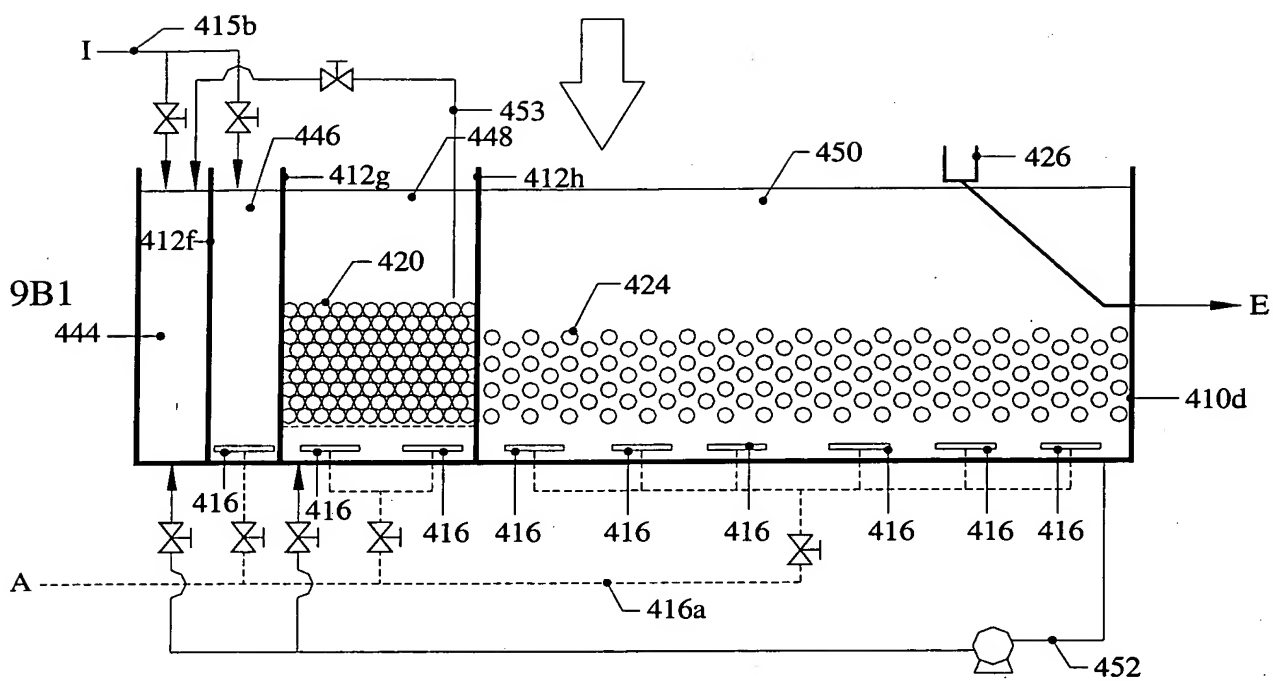


Fig. 9B

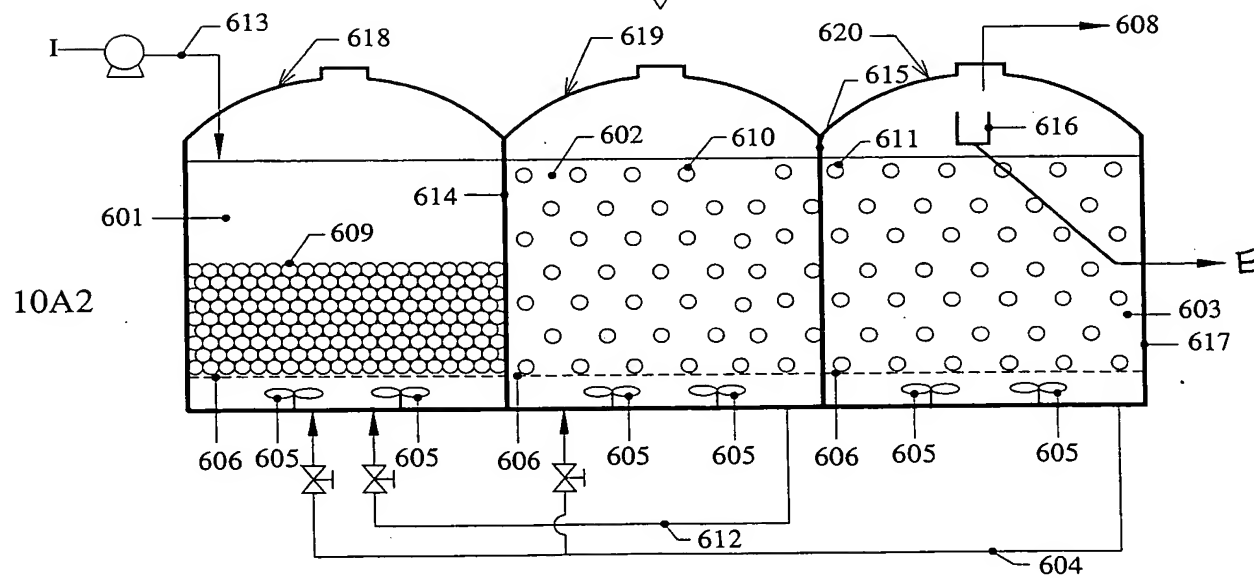
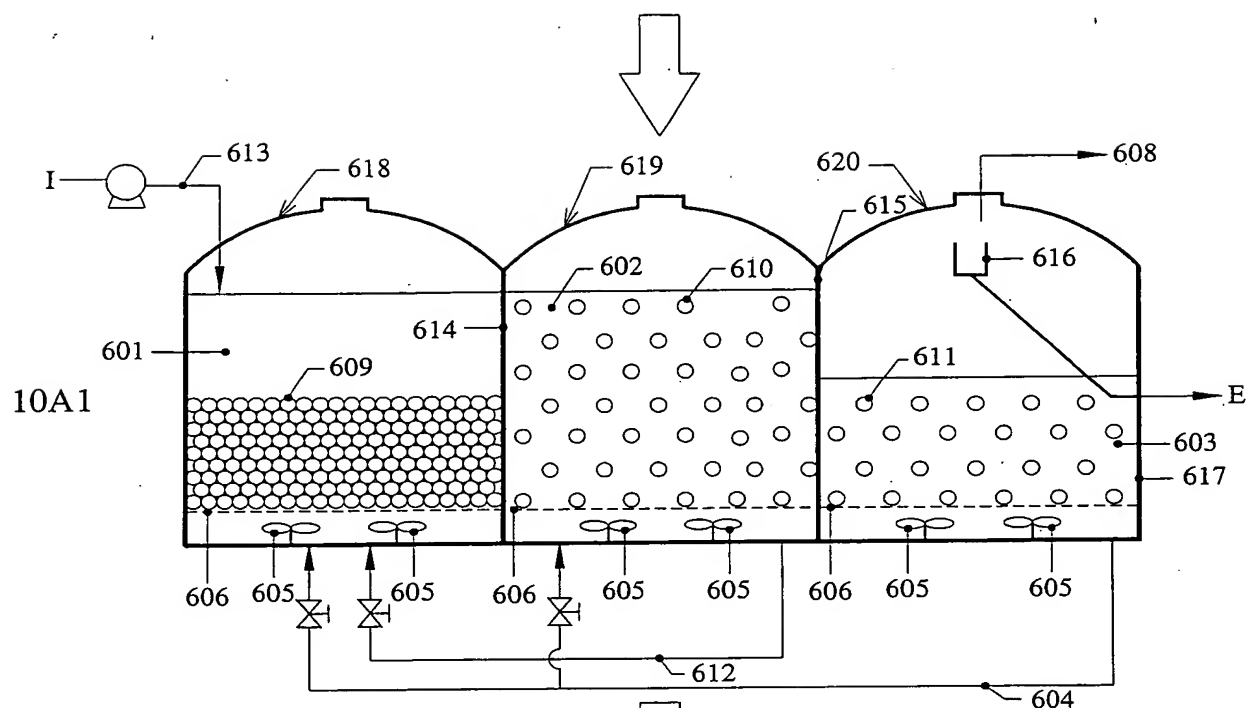


Fig. 10A

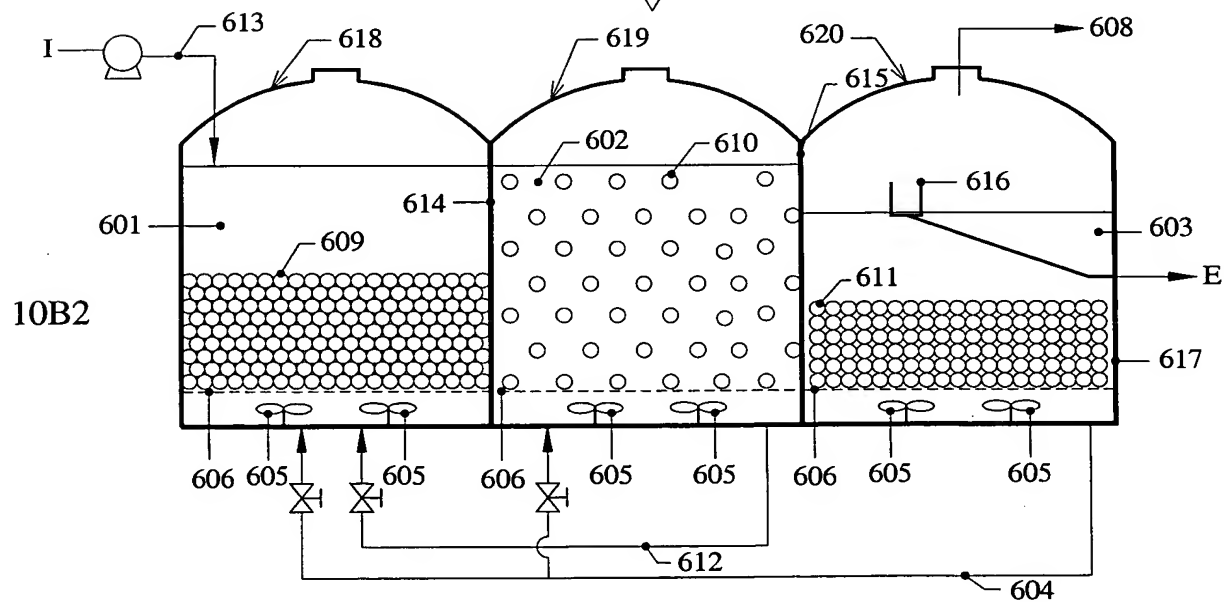
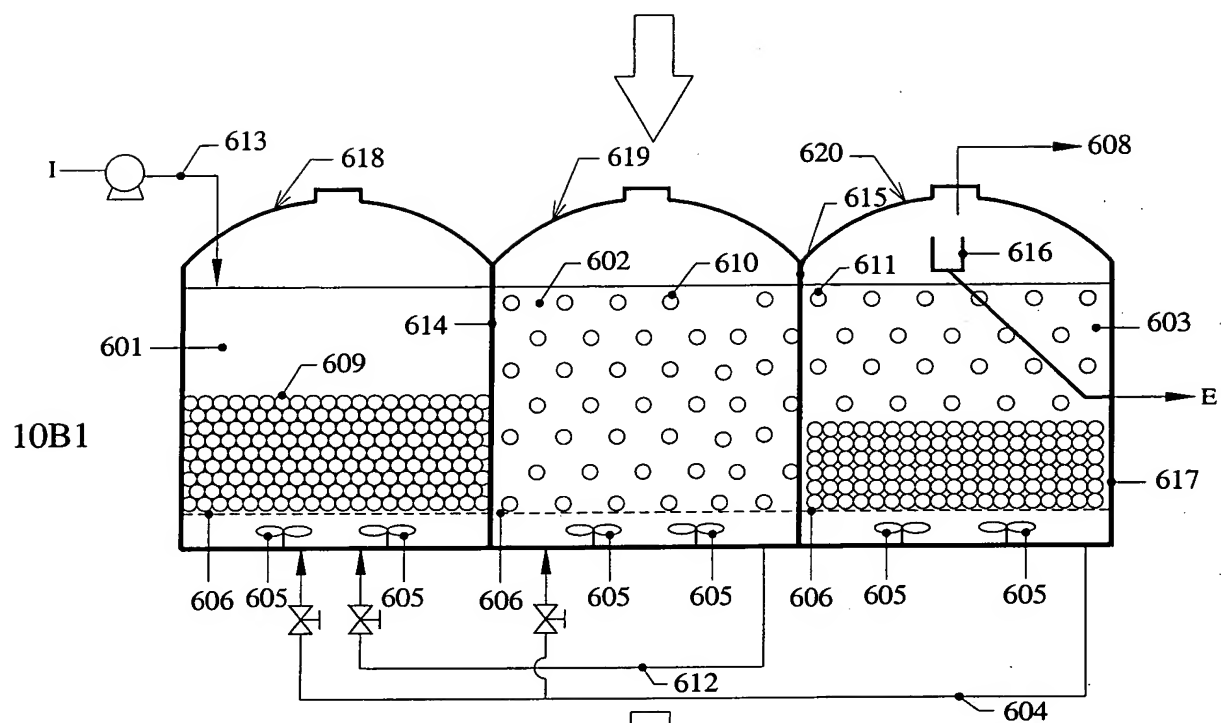


Fig. 10B